

BEFORE THE  
POLLUTION CONTROL HEARINGS BOARD  
STATE OF WASHINGTON

IN THE MATTER OF )  
ASARCO, INCORPORATED, )  
 )  
Appellant, )  
 )  
v. )  
 )  
PUGET SOUND AIR POLLUTION )  
CONTROL AGENCY, )  
 )  
Respondent, )  
 )  
MICHAEL E. NELSON, BRUCE E. )  
DUROCHER and DEBORAH A. SHORE, )  
 )  
Intervenors. )

PCHB No. 879

FINAL FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND ORDER

This matter, having come on for formal hearing before the above-entitled Board on October 20 through October 24, 1975, at Lacey, Washington, Chris Smith, Chairman, Walt Woodward and W. A. Gassberg sitting for and as the Board; and American Smelting and Refining Company, Inc. (ASARCO), appellant, appearing by and through its attorneys, C. John Newlands, Ronald A. Roberts and Robert F. Baker of Eisenhower, Carlson, Newlands, Reha, Elliott & Henriot of

1 Tacoma, Washington, and David W. Miller and Fredrick C. Schafrick of Shea  
2 & Gardner of Washington, D.C.; respondent, Puget Sound Air Pollution  
3 Control Agency (PSAPCA) appearing by and through its attorney, Keith D.  
4 McGoffin of Burkey, Marsico, Rovai, McGoffin, Turner & Mason of Tacoma,  
5 Washington; and intervenors, Michael E. Nelson, Bruce E. Durocher and  
6 Deborah A. Shore, appearing by and through Michael E. Nelson and Deborah  
7 A. Shore; several court reporters recorded the proceedings; and

8 The Pollution Control Hearings Board having heard and considered  
9 all of the testimony, and one of the above members who was not present  
10 at times, having read the transcript of the testimony presented during  
11 her absence, and all having considered the testimony, exhibits,  
12 arguments, and contentions of the parties, and the Board having served  
13 its proposed Order on all parties, and having received exceptions from  
14 appellant and intervenors, and said exceptions being granted in part or  
15 denied, the Board hereby makes the following

16 FINDINGS OF FACT

17 I

18 On February 19, 1975, ASARCO applied to the PSAPCA Board of  
19 Directors for a variance from Sections 9.03(a) and (b) and 9.19(c)  
20 of PSAPCA's Regulation I pursuant to the provisions of Section 7.01  
21 of Regulation I for its Tacoma plant; that said variance application  
22 related to the emissions from the main stack and from ground level  
23 sources which exceeded the opacity standard of 9.03(a) and (b) and  
24 the visible emissions of arsenic-containing particulate matter from  
25 stacks or vents, buildings, structures or facilities located at the  
Tacoma plant except those used for the primary purpose of manufacturing

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1 or transporting arsenic trioxide.

2 II.

3 After due notice, the matter came on for hearing before said  
4 Board of Directors on the 17th day of April, 1975; at said hearing  
5 representatives of ASARCO presented the variance application and  
6 supporting data in regard to the public health and economics; the  
7 staff of PSAPCA, having submitted a report, recommended granting of  
8 the variance if certain improvements were made; intervenors and  
9 representatives of the general public objected to the issuance of  
10 the variance on the grounds of endangerment of public health; the  
11 matter was continued for one month by said Board of Directors.

12 III.

13 On the 15th day of May, the hearing was reconvened before said  
14 Board of Directors and testimony was given by ASARCO regarding the  
15 health issue and evidence in regard to economic hardship was presented  
16 to said Board of Directors by virtue of letter dated May 5, 1975 by  
17 Armand Labbe, Manager of the Tacoma plant, and by ASARCO's delivery to  
18 one PSAPCA Board member of its SEC FORM 10-K which was previously  
19 filed with the Securities and Exchange Commission.

20 After review of the testimony, exhibits and arguments, said  
21 Board of Directors denied the variance application and on the 28th day  
22 of May, 1975, forwarded Resolution No. 306 to the parties, which  
23 Resolution No. 306 denied said variance request. ASARCO appealed said  
24 variance denial and Resolution No. 306 to the Pollution Control Hearings  
25 Board pursuant to the provisions of RCW 43.21B, RCW 70.94 and WAC 371-08.

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IV.

1           The Tacoma plant was originally constructed as a lead smelter  
2 in 1889. In 1905 the American Smelting and Refining Company, now  
3 known as ASARCO, Incorporated, purchased said lead smelter and  
4 converted it to a copper smelter; said smelter is unique because it  
5 is the only smelter in the United States that produces arsenic  
6 trioxide and processes ore and concentrates which contain high  
7 concentrations of arsenic.

8           In 1967, PSAPCA, a regional agency, was formed in the three-  
9 county area of King, Pierce and Snohomish Counties (Kitsap County was  
10 added later), and in 1968 the PSAPCA Board of Directors, after public  
11 hearing, passed said Regulation I establishing emission standards,  
12 ambient air quality standards and control measures and standards of  
13 performance and registration, notices of construction, variance  
14 provisions and general provisions regarding enforcement and procedures.

15           In 1970, the PSAPCA Board of Directors amended Regulation I by  
16 adopting 9.07(b) and (c), which seeks to ensure 90% control of sulphur  
17 oxide (SO<sub>2</sub>) emissions by requiring the Tacoma plant to emit no more  
18 than 10% of the sulfur which is contained in the concentrates fed into  
19 the smelting process; in 1970, ASARCO applied for a variance from  
20 the enforcement of 9.07(c) and the variance requested was granted by  
21 PSAPCA upon certain terms and conditions; such terms and conditions  
22 were appealed by ASARCO to the Pollution Control Hearings Board. After  
23 an extensive hearing, the Pollution Control Hearings Board remanded the  
24 variance request to the PSAPCA Board of Directors with the direction  
25 that a variance be granted in respect of 9.03, 9.07(a), (b) and (c),

and 9.09, subject to certain terms and conditions, one of which was  
2 that the variance would terminate on January 31, 1976, if ASARCO  
3 did not agree to implement a control program which would comply with  
4 the 90% SO<sub>2</sub> emission standards by December 31, 1976. Such a variance  
5 was issued by PSAPCA's Board of Directors on January 12, 1972.

6 V.

7 In the spring of 1972, Dr. Samuel Milham and Terry Strong of  
8 the Department of Social and Health Services of the State of Washington  
9 became aware of emissions of an El Paso lead smelter causing serious  
10 health problems and instituted an epidemiological sampling and study of  
11 the effects of the emissions from the Tacoma smelter among the residents  
12 and inhabitants in the vicinity of the smelter; the study was based upon  
13 urine, blood and hair sampling from a selected group of students  
14 from the Ruston Elementary School and a selected group of students  
15 from Fern Hill as baseline; said samples were analyzed by appropriate  
16 qualified laboratories and the results of the tests evidenced a higher  
17 amount of arsenic in the urine of the children of the Ruston School  
18 versus the children in Fern Hill.

19 VI.

20 Dr. Milham and Terry Strong appeared before the Board of Directors  
21 of the PSAPCA and presented the original study and results therefrom  
22 and urged the adoption of an arsenic emission standard for the Puget  
23 Sound area; after due review and examination of the subject, and after  
24 due notice and public hearing, the Board of Directors, on March 14, 1973,  
25 adopted Section 9.19 of Regulation I, establishing arsenic emission  
26 standard and 9.19(c) of said Section reads as follows:

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1 The owner or operator of a nonferrous smelter shall utilize  
2 the best available control technology, taking into account  
3 good operating practices, to limit visible emissions of  
4 arsenic-containing particulate matter from stacks or vents,  
5 buildings, structures or facilities, except as covered in  
6 Section 9.19(a) and (b) above.

#### 7 VII.

8 After the adoption of Section 9.19 of Regulation I, ASARCO filed  
9 a schedule with the PSAPCA Board of Directors, which schedule set  
10 forth measures which ASARCO immediately thereafter pursued to achieve  
11 compliance with the provisions of Section 9.19; a committee was also  
12 formed after such adoption of Section 9.19, which committee was comprised  
13 of representatives of ASARCO, PSAPCA, Environmental Protection Agency  
14 and interested citizens; said committee was concerned with the arsenic  
15 emissions from the Tacoma plant; said group's main function was to gather  
16 information concerning arsenic and to promote scientific studies  
17 regarding the relationship of arsenic emissions and lung cancer.

#### 18 VIII.

19 Continued studies regarding arsenic were conducted by the  
20 Department of Social and Health Services. Scientific and epidemiological  
21 studies were also being made and conducted throughout the world on the  
22 emissions from smelters, fossil fuel and other plants, and their  
23 relationship to health and safety of the in-plant workers and the  
24 community surrounding the plant.

#### 25 IX.

26 Based upon epidemiological studies, regarding the possible  
27 carcinogenic effect of arsenic compounds, the Federal Occupational  
28 Safety and Health Administration (OSHA) has proposed new extremely

1 stringent standards for in-plant exposure to arsenic in occupational  
2 settings; public hearings were held in respect of said proposed new  
3 standards and the recommended standard by the National Institute for  
4 Occupational Safety and Health was considered; said proposed standards  
5 have not been adopted and are the subject of present review. In the  
6 event that the proposed standards are adopted, ASARCO cannot continue  
7 its present mode of operations at the Tacoma plant in compliance therewith.

8 X.

9 PSAPCA, since the adoption of 9.19(c) in 1973, and during its  
10 regular observation of the Tacoma plant, observed suspected violations  
11 of 9.19(c) and recommended to ASARCO that a variance be requested;  
12 ASARCO submitted such a request, seeking a variance from 9.03(a) and  
13 (b) and 9.19(c) until January 31, 1976, the date that the 1972 SO<sub>2</sub>  
14 variance expires.

15 XI.

16 Commencing May 16, 1975, and continuing until August 20, 1975,  
17 over three hundred Notices of Civil Penalty were issued by the PSAPCA  
18 Control Officer for alleged violations of 9.03 and 9.19(c) of  
19 Regulation I. PSAPCA has since been restrained from assessing additional  
20 Notices of Civil Penalties by a Preliminary Injunction by the Pierce  
21 County Superior Court in Cause No. 237976.

22 XII.

23 Section 7.01(a) of Regulation I provides for the granting of a  
24 variance from rules or regulations of Regulation I if the Board finds  
25 that:

26  
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- 1 (1) The emissions occurring or proposed to occur do not  
2 endanger public health or safety; and  
3 (2) Compliance with the rules or regulations from  
4 which variance is sought would produce serious hard-  
5 ship without equal or greater benefits to the public.

6 and further provides in 7.01(e) as follows:

7 A variance or renewal shall not be a right of the applicant  
8 or holder thereof but shall be at the discretion of the  
9 Board. . . .

10 XIII.

11 The representatives of ASARCO presented before the Pollution  
12 Control Hearings Board extensive testimony concerning the financial  
13 conditions of the ASARCO Tacoma smelter plant and the cost of  
14 control programs versus the amount of profit and marginal financial  
15 condition of the plant; similar testimony was not presented before  
16 the Board of Directors of the PSAPCA in the public hearings in April  
17 and May on the variance request.

18 XIV.

19 Since the adoption of said Regulation I, ASARCO has expended  
20 considerable sums of money to assist in the controlling of emissions  
21 from the Tacoma plant; ASARCO, pursuant to the SO<sub>2</sub> variance, designed  
22 and constructed and is now operating an 18 million dollar liquid SO<sub>2</sub>  
23 plant; said plant operates at a 1-1/2 to 2 million dollar loss per  
24 year.

25 XV.

26 ASARCO has agreed to install and/or is in the process of  
27 designing, controls for a hood to control the emissions from the  
converter aisle pots, controls on the larry cars, installation of  
four charge guns on the reverbatory furnace, installation of hoods

1 on the reverbatory slag launders; installation of semi-automatic  
2 controls on the air supply to the converters and design of reverbatory  
3 building converter slag return launders; to meet the requirements of  
4 Sections 9.19(c) plus 9.03(a) and (b) ASARCO would have to expend an  
5 additional 20 million dollars; to meet all of the emission standards of  
6 Regulation I, ASARCO would have to expend an estimated eighty-nine  
7 million dollars for a completely new smelting process.

8 XVI.

9 ASARCO's Tacoma plant has an annual payroll of 16 million  
10 dollars, pays in excess of one million one hundred thousand dollars  
11 in State and local taxes and has spent over the last five years 21  
12 million dollars within the State of Washington for the purchase of  
13 equipment and supplies for the operation of the Tacoma plant.

14 XVII.

15 The Tacoma plant's operations and products significantly affect  
16 the national and international trade markets, the United States'  
17 balance of payments, and the Tacoma plant has at various times  
18 produced as much as ten percent (10%) of the copper which is smelted  
19 and refined in the United States.

20 XVIII.

21 Other programs have been instituted at the Tacoma plant in  
22 respect of the SO<sub>2</sub> variance such as meteorological equipment purchases,  
23 the design, construction and operation of an air monitoring system;  
24 all at a considerable financial cost to ASARCO.

25 XIX.

26 A recapitulation of the financial status of the Tacoma plant

1 during the past ten years demonstrates that the Tacoma plant has an  
2 annual profit of 1.9 million dollars before taxes; however, with the  
3 operation of the SO<sub>2</sub> plant, said amount has been reduced because the  
4 liquid SO<sub>2</sub> plant costs 1-1/2 to 2 million dollars annually to operate.

5 XX.

6 Using good business judgment, ASARCO, Inc. cannot commit itself,  
7 without substantial financial risk, to the costs of designing,  
8 installing and operating controls to meet the requirements of Regulation  
9 I during the very short period of the variance request. The decision by  
10 ASARCO to incur such cost will be based upon the future copper market,  
11 the air emission standards and the in-plant arsenic standards of OSHA.

12 XXI.

13 The Tacoma plant is a "custom smelter" and produces 95% of the  
14 arsenic produced in the free world; arsenic emissions from the Tacoma  
15 plant come from the tall stack and fugitive emissions from the low  
16 level sources such as the converter building, reverbatory building,  
17 stock piles, warehouse buildings, etc.

18 XXII.

19 The medical studies performed by the State Department of Social  
20 and Health Services evidence that the urinary arsenic levels in  
21 children in the Ruston area were three to four times higher than the  
22 urinary arsenic levels in children in Fern Hill.

23 XXIII.

24 There is an increase of lung cancer among the smelter workers  
25 at the Tacoma smelter in excess of the rate of lung cancer found in  
26 employees in non-smelter employment. Such increase of lung cancer among

1 smelter workers is attributable to occupational exposure to high  
2 concentrations of arsenic over an extended period of time in occupational  
3 conditions. The variance request is directed to particulate and arsenic  
4 emissions to the ambient air outside the Tacoma plant and is not  
5 directed to occupational exposure levels in the Tacoma plant.

6 XXIV.

7 The medical testimony established that arsenic trioxide is a  
8 carcinogen. However, there was no persuasive proof presented by any  
9 party as to a safe or unsafe concentration of arsenic or a safe or unsafe  
10 time of exposure to arsenic, but only the theories and opinion-conclusions  
11 of experts on both sides of the issue. Based upon the testimony given,  
12 the Pollution Control Hearings Board cannot find that any party has proven  
13 that an endangerment to public health from arsenic will or will not occur.

14 XXV.

15 The Tacoma plant emits from the tall stack and from low level  
16 sources particulates which ascend into the atmosphere; said emissions  
17 include particles of submicron size and said emissions become part of  
18 the ambient air over the Puget Sound area.

19 XXVI.

20 ASARCO, Inc. presented no persuasive testimony that particulate  
21 emissions from the Tacoma plant during the requested variance period  
22 would not endanger the public health and safety of the inhabitants of  
23 the area.

24 XXVII.

25 There is available technology to control the arsenic and  
26 particulate emissions from the Tacoma smelter.

XXVIII.

Respondent, pursuant to RCW 43.21B.260, has filed with this Board a certified copy of its Regulation I containing respondent's regulations and amendments thereto.

XXIX.

Any Conclusion of Law which should be deemed a Finding of Fact is hereby adopted as such.

From the foregoing Findings of Fact, the Pollution Control Hearings Board makes the following

CONCLUSIONS OF LAW

I.

Pollution Control Hearings Board has jurisdiction of the parties and subject matter of the appeal.

II.

Pollution Control Hearings Board's proper standard of review of a variance from the regional air pollution control agency is de novo except that appellate review by the Pollution Control Hearings Board is limited to a review as to whether or not the granting or denying of a variance by PSAPCA was an abuse of discretion as the power of the regional agency to grant or deny a variance is discretionary.

III.

ASARCO has failed to sustain the burden of proof (which rests upon it) that the emissions from the Tacoma plant during the period of the variance would not endanger public health and safety in regard to the particulate emissions from the smelter in violation of said Section 9.03(a) and (b).

IV.

ASARCO has failed to sustain the burden of proof (which rests upon it) that the arsenic emissions from the Tacoma plant during the requested variance period would not endanger the public health or safety.

V.

Compliance by the Tacoma plant with Sections 9.03(a) and (b) and 9.19(c) of Regulation I would work a serious hardship upon ASARCO without equal or greater benefit to the public, particularly with respect to as yet undetermined impending Occupational Safety and Health Administration (OSHA) standards, said 90% SO<sub>2</sub> standard of Regulation I, and with respect to the investment required by ASARCO to comply with various sections of Regulation I during the pendency of the adoption of the OSHA standards and the expiration of said 1972 SO<sub>2</sub> variance.

VI.

The Board of Directors of PSAPCA did not abuse its discretion in denying the variance application of ASARCO for the Tacoma plant in respect of Sections 9.03(a) and (b) and 9.19(c) of Regulation I.

VII.

The denial of the variance application of ASARCO for the Tacoma plant should be affirmed.

VIII.

Any Finding of Fact which should be deemed a Conclusion of Law is hereby adopted as such.

From these Conclusions, the Pollution Control Hearings Board

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enters this

ORDER

The denial by PSAPCA of the variance request of ASARCO be and the same is hereby affirmed.

DONE at Lacey, Washington, this 19<sup>th</sup> day of April, 1976.

POLLUTION CONTROL HEARINGS BOARD

  
CHRIS SMITH, Chairman

  
W. A. GISSBERG, Member

  
WALT WOODWARD, Member

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